

AMENDMENTS TO THE CLAIMS

Please amend the claims as follows.

1.-8. (Canceled)

9. (Currently Amended) A method of measurement using the surface plasmon resonance sensor chip according to claim 1, that comprises a transparent substrate with a flat surface on a first side; and a metal layer including a flat part of metal thin film formed on the flat surface of the substrate, and a plurality of metal particles that are arranged spaced apart from each other immediately above the flat part and that have a diameter between 20 nm and 150 nm, wherein the metal particles are made of a same material as the flat part, and wherein the transparent substrate comprises a surface for receiving light on a second side opposite to the first side,

the method comprising:

contacting a sample solution to a side of the sensor chip formed with the metal layer;

irradiating light from an optical system towards the chip on a side of the chip not formed with

the metal layer, the light having different frequencies or angles of incidence;

detecting a light totally reflected at the interface of the metal layer and the substrate with a light detector;

obtaining at least two resonance frequencies or resonance angles from the intensity of the totally reflected light detected with the light detector; and

obtaining a change in a refraction index of the sample solution in a vicinity of the metal particles and at a distance of approximately a radius of the metal particles from a surface of the metal

particles based on a change in one of the two resonance frequencies or the resonance angles and based on a change in the other resonance frequency or the resonance angle.

10. (Previously Presented) The method of measurement according to claim 9, wherein the sample solution contains biomolecules; the method further comprises immobilizing acceptors on the metal layer of the sensor chip; and the presence and the extent of interaction between the biomolecules and the acceptors are obtained based on the change in the refraction index of the sample solution in the vicinity of the metal particles and at a distance of about the radius of the metal particles from the surface of the metal particles.